### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property **Organization** International Bureau



# 

(43) International Publication Date 4 August 2005 (04.08.2005)

**PCT** 

# (10) International Publication Number WO 2005/070988 A1

(51) International Patent Classification<sup>7</sup>: 18/44, 18/46, 18/38, A61L 27/18

C08G 18/76,

Tottenham Court Road, London W1T 4TP (GB).

c/o UCL Biomedica PLC, The Network Building, 97

(21) International Application Number:

PCT/GB2005/000189

(74) Agents: SIMONS, Amanda, Louise et al.; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).

(81) Designated States (unless otherwise indicated, for every

kind of national protection available): AE, AG, AL, AM,

- (22) International Filing Date: 20 January 2005 (20.01.2005)
  - English

(25) Filing Language:

(26) Publication Language:

English

(30) Priority Data: 0401202.7

20 January 2004 (20.01.2004) GB

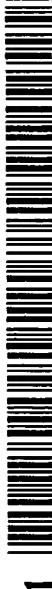
- AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (71) Applicant (for all designated States except US): UCL BIOMEDICA PLC [GB/GB]; c/o Finance Dvision, University College London, Gower Street, London WC1E 6BT (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SEIFALIAN, Alexander [GB/GB]; Royal Free and University College Medical School, Rowland Hill Street, London NW3 2PF (GB). SALACINSKI, Henryk [GB/GB]; Royal Free and University College Medical School, Rowland Hill Street, London NW3 2PF (GB). SRAI, Kaila [GB/GB]; Royal Free and University College Medical School, Rowland Hill Street, London NW3 2PF (GB). RAMESH, Bala [GB/GB]; Royal Free and University College Medical School, Rowland Hill Street, London NW3 2PF (GB). DARBYSHIRE, Arnold [GB/GB]; c/o UCL Biomedica PLC, The Network Building, 97 Tottenham Court Road, London W1T 4TP (GB). HANCOCK, Steve [GB/GB];
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

- (54) Title: POLYMER FOR USE IN CONDUITS, MEDICAL DEVICES AND BIOMEDICAL SURFACE MODIFICATION
- (57) Abstract: A copolymer comprising (a) one or more pendant group segments and (b) one or more polyol segments, each of said segments being linked to one or more further segments, and one or more of the pendant group segments being selected from: (i) siloxane segments; (ii) segments containing phosphoryl choline or a derivative or analogue thereof; (iii) segments containing a dior trifluoromethyl group; (iv) heparin-like segments containing a group of formula: (XII) D-N=N-Ar-SO<sub>3</sub> (v) segments containing a group of formula: (I) [P]<sub>n</sub>·-[Lys]<sub>n</sub>-Lys-[Spacer]-Lys-[Al]<sub>x</sub> in which D, Ar, P, Lys, Al, Spacer, x, n and n' are as defined herein, and wherein at least a part of each of said pendant group segment(s) is on a side chain of the copolymer. The copolymer is useful in the production of implantable devices such as vascular grafts.



88604